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China: Agricultural Performance in 1974

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# Intelligence Memorandum

*China: Agricultural Performance in 1974*

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ER IM 75-4  
March 1975

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON, D.C. 20505

March 24, 1975

The attached list of economic indicators  
for the People's Republic of China brings up to  
date the list that was published in June 1974.

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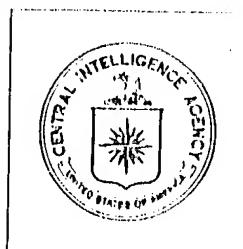
MAURICE C. ERNST  
Director  
Economic Research

Attachment

## People's Republic of China: Economic Indicators

	March 1955																		
	1952	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
GNP (billion 1973 US \$)	67	94	113	107	106	82	93	103	117	134	145	141	142	157	179	193	197	217	223
Population, midyear (million persons)	570	641	657	672	685	695	704	716	731	747	763	780	798	817	837	857	875	898	922
Per capita GNP (1973 US \$)	117	147	172	160	155	118	133	144	160	179	190	180	178	192	214	222	226	241	245
Grain (million metric tons)	154	165	203	165	160	160	180	185	195	210	215	230	215	220	225	245	255	258	258
Cotton (million metric tons)	1.3	1.6	1.7	1.2	0.9	0.8	1.0	1.2	1.7	1.8	1.8	1.9	1.8	1.8	2.0	2.1	2.3	2.3	2.3
Industrial production index (1957 = 100)	48	100	145	177	154	104	114	127	133	139	131	122	122	125	133	137	141	142	142
Crude steel (million metric tons)	1.35	5.35	11.1	13.4	18.7	3	8	9	10.5	12.5	15	12	14	12	17.5	21	22	23.5	23.5
Coal (million metric tons)	66.5	130.7	230	360	280	170	180	190	204	220	248	190	235	255	310	335	355	377	387
Electric power (billion kilowatt hours)	7.5	19.3	25	42	47	31	30	33	36	42	50	45	50	60	72	86	93	101	103
Crude oil (million metric tons)	0.44	1.46	2.3	3.7	5.5	5.3	5.8	6.4	8.7	10.5	13.9	13.9	15.2	20.3	28.5	36.7	45	52.5	55.2
Cement (million metric tons)	2.86	6.85	10.7	12.3	12.0	9.0	6.9	9.1	10.9	14.3	16.9	14.2	17.4	17.5	22.5	27.2	28.2	31.2	31.2
Chemical fertilizers (million metric tons)	Supply	0.4	2.1	3.2	3.3	3.6	2.9	4.0	6.6	7.6	10.7	13.2	13.5	15.6	17.9	21.2	24.2	27.5	31.2
Production	0.2	0.8	1.4	1.9	2.5	1.8	2.8	3.9	5.3	7.5	9.6	8.1	9.5	11.3	14.0	16.3	19.9	24.3	24.3
Imports	0.2	1.3	1.8	1.4	1.1	1.1	1.2	2.7	1.8	3.2	3.6	5.7	6.1	6.6	7.5	7.4	7.4	8.1	8.1
Machinet tools (thousand units)	13.7	26.5	76	35	46	30	25	35	40	45	50	40	45	55	72	75	80	N.A.	N.A.
Trucks (thousand units)	0	7.5	16.0	19.4	15	8.4	16.8	20.3	30	43	32	27	60	74	86	100	119	N.A.	N.A.
Locomotives (units)	20	167	350	523	557	78	27	27	40	40	30	240	261	285	205	225	240	N.A.	N.A.
Freight cars (thousand units)	5.8	7.5	11	17	23	3	4.0	5.9	5.7	6.5	7.5	6.9	8.7	11	12	14	15	N.A.	N.A.
Cotton cloth (billion linear meters)	2.63	5.05	5.7	6.1	4.9	5.5	3.5	4.6	5.1	6.4	6.7	5.5	6.0	6.8	7.5	7.2	7.4	7.6	7.6
Foreign trade (billion current US \$)	Total	1.89	3.06	5.76	4.29	3.99	3.02	2.68	2.77	3.22	3.98	4.24	3.90	3.76	3.86	4.29	4.72	5.32	5.38
Exports f.o.b.	0.88	1.62	1.94	2.23	1.96	1.53	1.53	1.57	1.75	2.04	2.21	1.95	1.94	2.03	2.05	2.41	3.08	4.90	5.2
Imports c.i.f.	1.01	1.44	1.82	2.06	2.03	1.49	1.15	1.20	1.57	1.84	2.05	1.95	1.82	2.21	2.31	2.54	2.83	3.1	3.1

Source: Central Intelligence Agency, Office of Economic Research.



## China: Agricultural Performance in 1974

Peking claimed a record 1974 grain harvest, but the lack of official fanfare suggests the improvement was moderate. We believe 1974 grain output was about 255 million metric tons, an increase of 2% over 1973.

Early-harvested grain crops – accounting for about two-fifths of China's grain output – were mixed in 1974. Early rice was up substantially, while winter wheat production was little, if any, better than 1973.

Delayed planting caused by the expansion of early-harvested crop acreage, a dry spring and summer, and wind and rain during harvest prevented China from making a major gain in grain output in 1974.

The growth of output was also kept down by a 4% decrease in the availability of chemical fertilizers. The decrease is attributable to a drop in imports resulting from high prices in the international fertilizer market and from foreign exchange difficulties.

China postponed about 2.0 million tons of grain imports which reduced imports for the year to about 7.0 million tons, or 9% below the record imports of 1973. On a tonnage basis, the US share of China's grain imports was about 40% in 1974. All contracts outstanding for US grains were canceled in early 1975; the United States is considered a residual source of supply for imports not covered by long-term agreements with Canada, Australia, and Argentina.

As for 1975 crop prospects, winter wheat appears to be off to a good start on a slightly expanded acreage. The fortunes of the other crops to be planted later in the year will depend on weather and, in large measure, on the progress made in the current Chinese drive to improve water management projects and to

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Note: Comments and queries regarding this memorandum are welcomed. They may be directed to [redacted] of the Office of Economic Research, Code 143, Extension 7410.

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provide increased inputs to agriculture. These programs are not likely to result in rapid increases in agricultural output until the end of the decade. In the interim, China will require grain imports of about 5 million tons per year to meet the needs of an increasing population.

## DISCUSSION

### Introduction

1. Generally unfavorable weather for winter wheat and for fall-harvested grains prevented China from making a major gain in grain output in 1974. This memorandum reviews 1974 agricultural production, discusses China's grain imports, and evaluates 1974 in the light of China's long-term program to achieve self-sufficiency.

### Grain Production

2. The grain harvest of 1974 was slightly better than the harvest of 1973 (see Table 1). A 22 December statement that "total grain output shows a fairly big increase over 1973, itself a good year, to set a new record" eventually gave ground to a terse year-end pronouncement of "an all-around good harvest." Premier Chou En-lai later reported that grain output increased 1.4 times between 1949 and 1974. This implies a 1974 output on the order of 260 million tons. In any event, figures derived from statements such as Chou's are approximations, at best, rather than precise measurements of output. We believe grain output in 1974 was about 255 million tons, an increase of 2% over 1973.

### The Spring Harvest

3. The spring harvest – accounting for about two-fifths of the annual harvest of grain – was the best in several years.\* The increase stemmed from a rise in early rice output in the south, where acreage was at record levels. Production increases of varying degrees were reported by all 13 early rice provinces except Kiangsu and Kweichow, where part of the crop was lost because of adverse weather. Early rice production was up 40% in Szechwan, 20% in Yunnan, and 10% in Hupeh, Kwangtung, and Kiangsi. In Kwangtung, which accounts for about 20% of the early rice acreage, unseasonable spring frosts delayed transplanting. Subsequently, the weather improved, and both production and yields were claimed to be at all-time highs. At least part of the increase is attributable to maturation of the crop during a more suitable time of year because of the delayed planting.

\* The Chinese grain harvest consists of early and a late (autumn) harvest. The *early harvest* consists of (a) spring and summer grains (including winter wheat, barley, rye, pulses, sweet potatoes, and fast-maturing catch crops sown in the early spring and harvested in the early to midsummer) and (b) early rice. The summer grains and early rice each account for about 20% of China's production of grain. The *late harvest*, consisting primarily of intermediate and late rice and coarse grains (corn, millet, and sorghum), is the more important, providing about 60% of the total annual output of grain.

Table 1

China: Production of Grain

		Million Metric Tons	
Year	Production	Year	Production
1952	154	1966	215
1957	185	1967	230
1960	160	1968	215
1964	195	1969	220
1965	210	1970	240
		1971	246
		1972	240
		1973	250
		1974	255 <sup>1</sup>

1. Preliminary.

4. Production of early-harvested crops in the north - primarily winter wheat - probably was below the poor 1973 crop despite a record acreage. The disappointing harvest of winter crops is attributable to weather. Wet weather in the fall of 1973 (see Figure 1) retarded sowing and resulted in poor crop stands on much of the acreage that was planted. The wet fall was followed by one of the driest winters and springs in recent years (see Figure 2). Five of eight major winter wheat growing provinces reported substantial acreage increases in 1974, but only two claimed an increase in output. Of the two, only Honan Province, representing about 20% of winter wheat acreage, claimed a "record" crop.

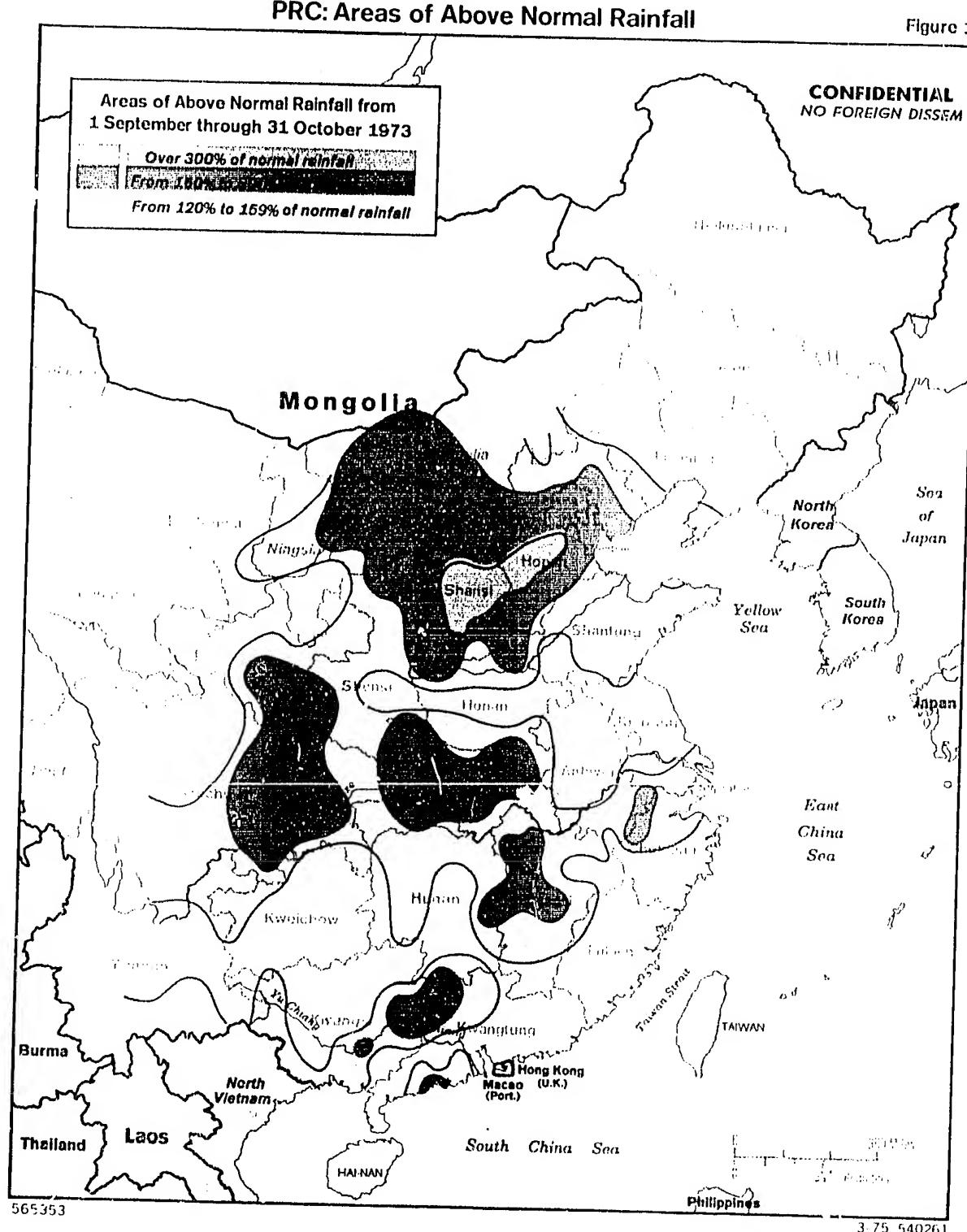
#### The Fall Harvest

5. The Chinese made no official claim for the 1974 fall harvest; a strong indication the harvest may not have measured up to the relatively good fall harvest of 1973. Although few widespread adverse growing conditions were evident, isolated difficulties took their toll from planting through harvest in key producing areas.

6. Rainfall was below normal from April through June over much of north and south-central China (see Figure 3). In north China, coarse grains got off to a poor start, and improved moisture conditions later in the growing season probably came too late to reverse the trend. The dry spring and summer were less damaging to crops - primarily rice - in south-central China because of the more highly developed water control systems in the region.

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Figure 1

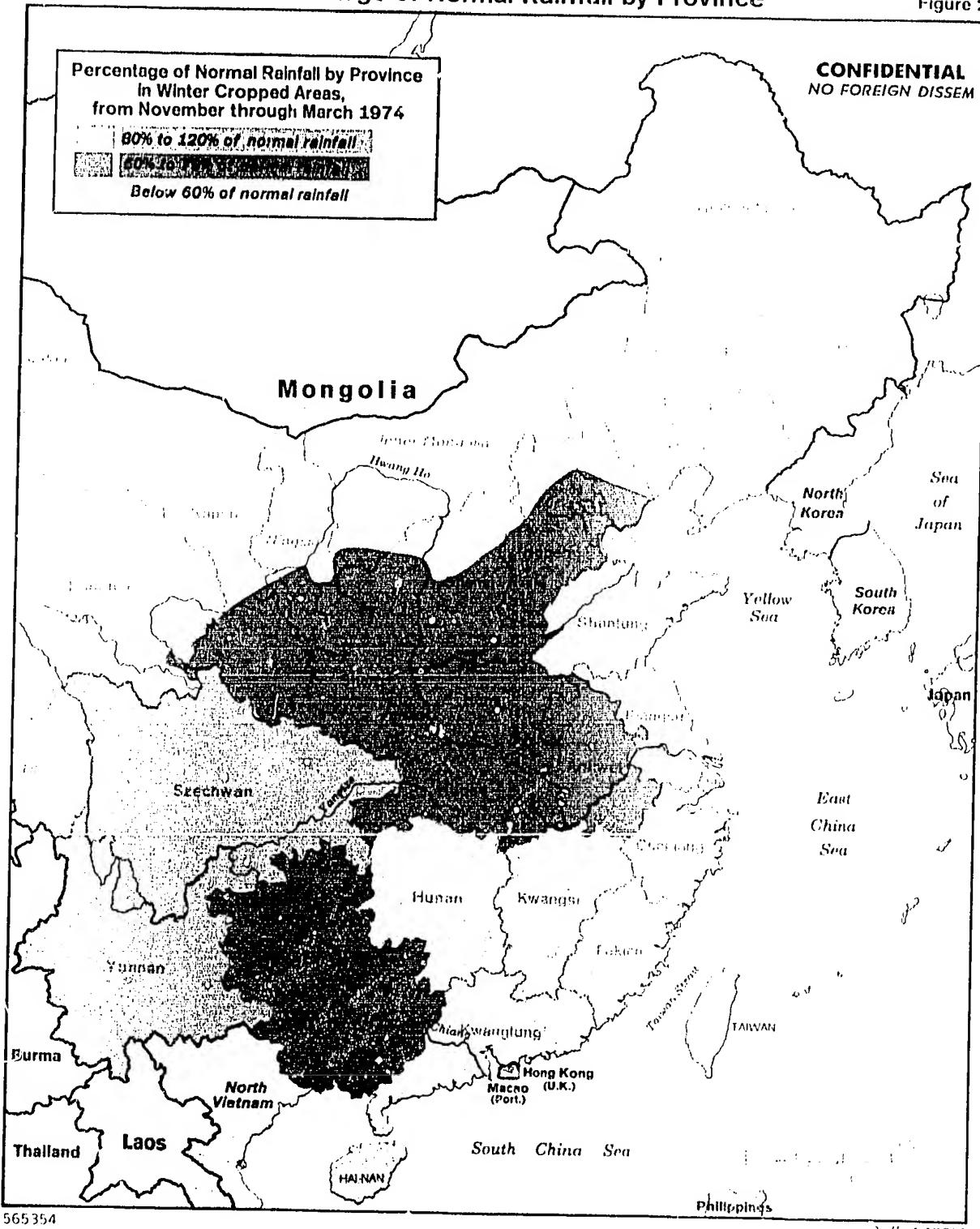


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## PRC: Percentage of Normal Rainfall by Province

Figure 2

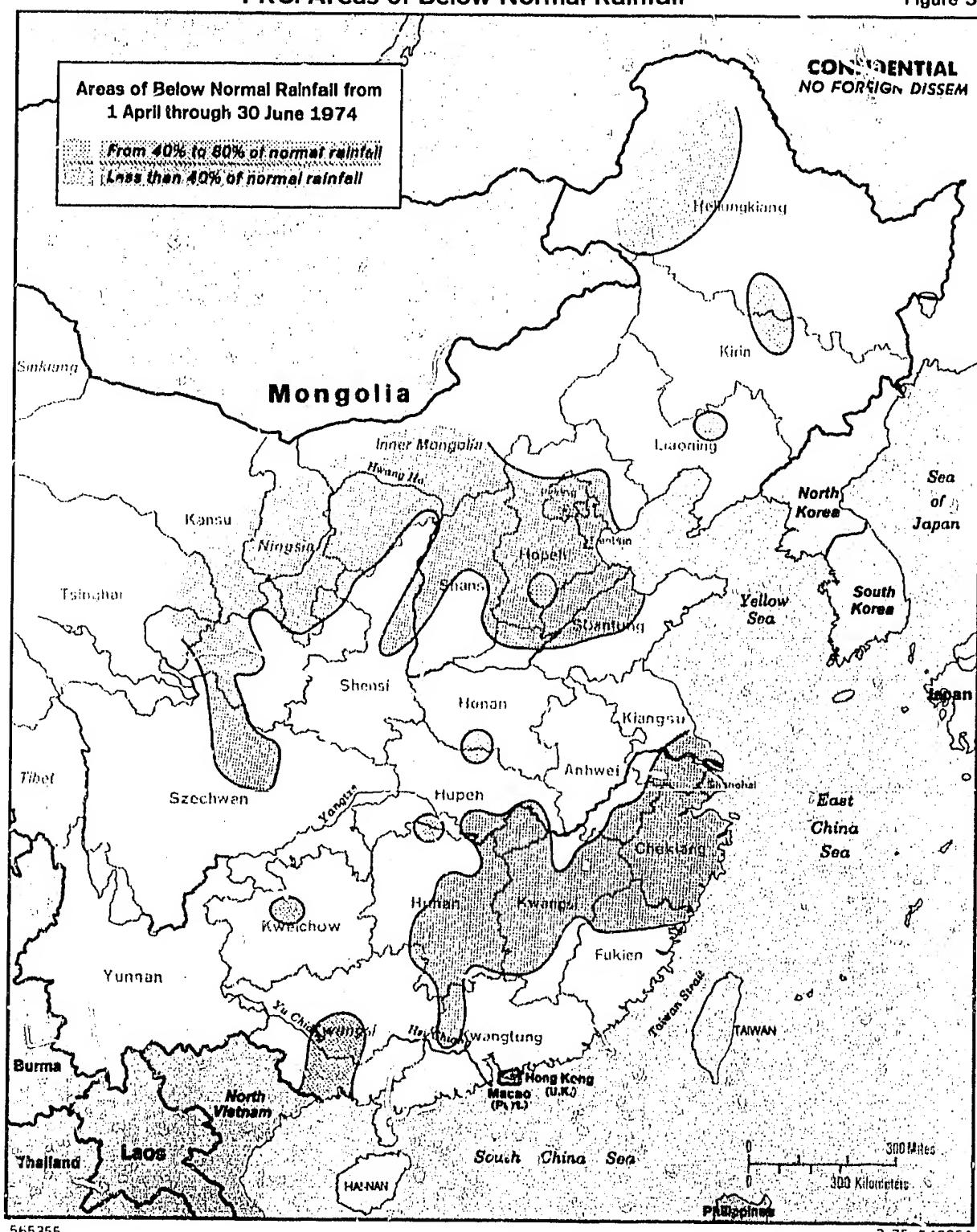


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Figure 3



7. During August, excessive rainfall occurred over key areas of the North China Plain. (The main areas affected are shown on Figure 4.) Although the rainfall did not lead to widespread flooding, it caused local flooding and waterlogging. Little was said by official sources concerning flood damage to the crops, but it likely accounts for the complete lack of reporting from Kiangsu Province and the ambiguous claims for grain output in Shantung and Honan Provinces. Only Hopeh -- which normally produces about one-half the grain of any one of aforementioned provinces -- cited a slight improvement in grain output. Official reporting from these provinces also listed a mixed bag of other natural hardships, including summer wind and hail storms. In short, heavy rainfall during August lowered yields of ripened coarse grains and complicated the harvest, whereas drought during the summer months stunted development of all fall-harvested crops.

8. Growing conditions were mixed for the crops of intermediate and late rice. Intermediate rice was transplanted in good time and probably got off to a good start. The late crop, however, was delayed by the unusually late harvesting of the early rice. Both crops were affected at various times by periods of dry weather during the summer and early fall. Kwangsi had slightly better moisture during the maturation of its record acreage of late rice, but backward irrigation facilities coupled with insect pests reduced yields. Kwangtung and Fukien Provinces were especially hard hit. The summer was especially dry; an unusually large number of typhoons damaged the late rice crop during the late summer and early fall; and in October, still more winds hit Kwangtung and heavy rains pelted both provinces, probably causing shattering and lodging of the grain.

9. Conditions in northeast China -- a major producer of coarse grains and spring wheat -- were good. Liaoning and Kirin Provinces both claimed record grain output. Heilungkiang claimed a 60% increase in output over 1973, most of it attributable to improved growing conditions for the important spring wheat crop.

#### Industrial Crops and Soybeans

10. Production of industrial crops showed little improvement over 1973. No claim was made for rapeseed, which accounts for most of the oilseed produced, but output of sesame, peanuts, and linseed apparently made up the difference and allowed slight improvement over 1973. Output of tobacco and sugar was about the same as in 1973, while that of jute and hemp was up 16% in 1974. Although China officially gives financial help to major industrial crop areas and preferential treatment in the supply of foodgrain and fertilizer, the drive for increased grain production may have caused decreased acreage of some industrial crops in 1974.

Figure 4

## PRC: Above Normal Rainfall and Tropical Storms



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11. Cotton output admittedly decreased in 1974, but apparently the shortfall was relatively small. Official reports cited drought and waterlogging as problems in key producing areas, and only two provinces claimed production increases over 1973 levels. Precipitation was higher than normal during the harvest in all major producing provinces except Hunan, which claimed a 30% increase over 1973. Based on Premier Chou En-lai's announcement that cotton output increased 4.7 times between 1949 and 1974, China produced approximately 2.5 million tons of cotton in 1974.

12. As in the case of other East Asian cotton importers, China began to reduce imports of cotton at about midyear. The Chinese canceled orders for about 7,500 tons of US cotton and reportedly are negotiating to postpone or cancel much of the balance of 118,000 tons. China began selling cotton in late 1974 and has succeeded in selling about 5,000 tons thus far. Peking probably would like to expand such sales as they earn foreign exchange while markets for Chinese textile products are depressed. The international cotton market, however, is unusually soft at this time, and it is doubtful if the Chinese can find buyers willing to make large purchases of either raw cotton or cotton textiles.

#### Sugar Crops

13. Long-term growth of cane and beet sugar output in China has been constrained by shifts in acreage caused by the need to increase grain production. Production of raw sugar in 1974 totaled an estimated 1.8 million tons, which was rated in official statements as a "good" harvest and 30% greater than the 1971 harvest. A lack of comparisons with 1973 in official reporting indicates that production was at best constant over the last two years. In Heilungkiang, China's major sugar beet area, production and yields on 120,000 hectares of sugarbeets were claimed to be higher than in 1973. In Kwangtung, which grows roughly one-half of China's sugarcane, average yields were claimed for 200,000 hectares. In Kwangsi, which has apparently displaced Szechwan as China's second most important source of sugarcane, 320,000 tons of sugar were produced from about 107,000 hectares for an average yield of about 3 tons per hectare. Although low in comparison to sugar yields in more technically advanced sugar producing nations, about one-third of Kwangsi's cane land is claimed to be "idle" land brought into production since 1970. This last factor may indicate at least a localized lessening of the competition for land between grain and sugarcane, the latter being a perennial crop.

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### Soybeans

14. Despite their importance in China's agriculture, soybeans received scant official press coverage in both 1973 and 1974. Weather conditions and overall production in 1974 were good in northeast China, where most of China's beans for export are grown, yet the crop was not mentioned in provincial or national reporting. A lack of reporting from producing provinces leaves trade as the only source of data to evaluate recent soybean crops. China's soybean exports to its principal customer, Japan, declined by about 40% from 1968 to 1972. Meanwhile, China began to import soybeans in October of 1972, mainly from the United States. Although Chinese imports ceased in the fall of 1974, Japanese concern about China's ability to deliver suggests that this crop continues to have problems.

### Other Factors Affecting 1974 Performance

15. Fertilizer supplies declined slightly in 1974 and undercut Chinese attempts to raise yields. Domestic production increased only slightly over that of 1973. High international prices for fertilizer led China to cut back its imports in 1974. These imports fell off even further during the year, as some imports from Japan were postponed because of foreign exchange difficulties. Thus, total supply of chemical fertilizer (domestic production plus imports), which rose by 17% in 1973 over 1972, decreased by about 4% in 1974 (see Table 2).

16. To reap the greatest advantage from chemical fertilizers, high-yielding farmlands with dependable systems of water supply and water control are essential. The improvement of water management in China has been difficult, particularly in the large and poorly drained areas of the North China Plain. At least two major grain producing provinces in this area were affected by drought during June and July of 1974. Wells were inadequate to offset the shortage of rainfall because continuous pumping lowered the water table to a point where many wells went dry.

### Grain Imports

17. Chinese grain imports have been used to maintain rations in northern cities and thus to reduce internal procurement and distribution problems. By early 1974, China had contracted for more than 9 million tons of grain. By the end of the year, however, a combination of contract cancellations, shipping difficulties, and postponements reduced imports to 7.0 million tons, about 9% below 1973, and about the same amount as imported in the mid-1960s (see Figure 5). Peking

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Table 2  
China: Estimated Availability of Chemical Fertilizers<sup>1</sup>

Year	Total Supply	Million Metric Tons	
		Production	Imports
1961	0.53	0.36	0.22
1962	0.79	0.55	0.24
1963	1.30	0.76	0.54
1964	1.49	1.13	0.36
1965	2.10	1.46	0.64
1966	2.60	1.88	0.72
1967	2.75	1.60	1.15
1968	3.12	1.89	1.23
1969	3.55	2.24	1.31
1970	4.26	2.78	1.48
1971	4.82	3.34	1.48
1972	5.30	3.95	1.55
1973	6.43	4.91	1.52
1974	6.18	4.95	1.23 <sup>2</sup>

1. Actual weight of primary nutrient content nitrogen, phosphoric acid, or potassium oxide.

2. Estimated.

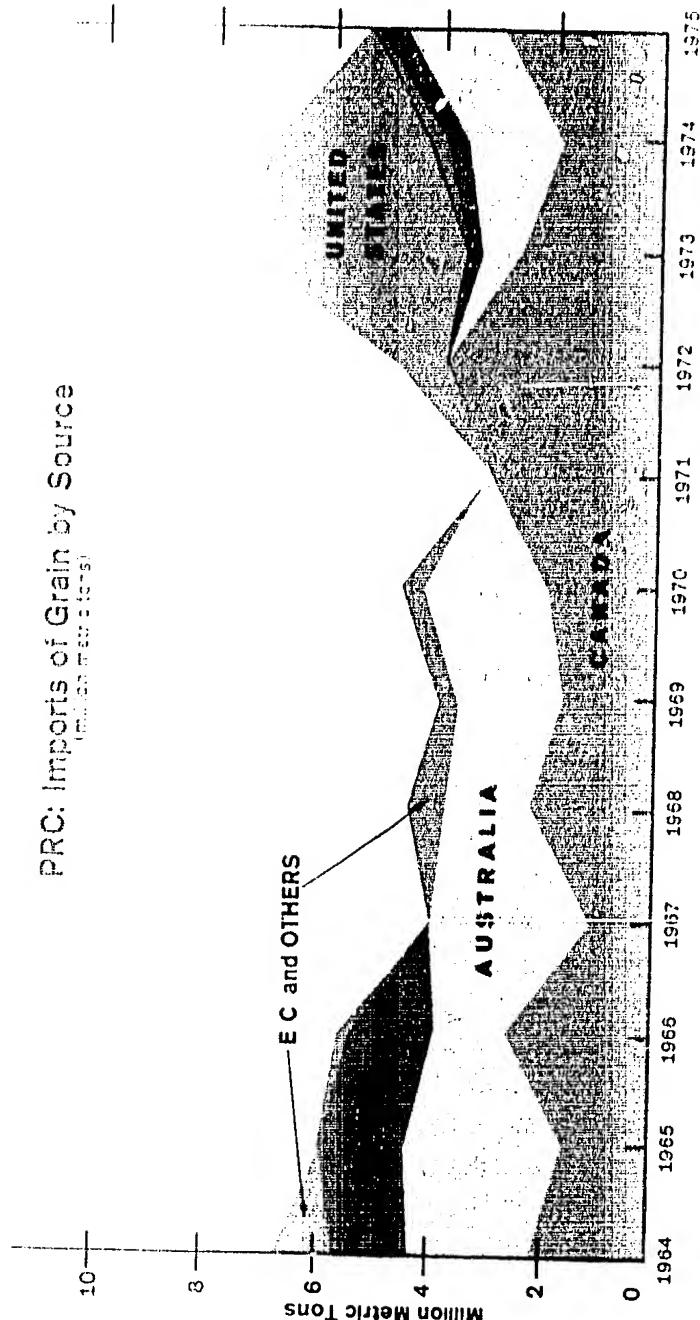
also canceled contracts for almost 1.0 million tons of US wheat in early 1975, thereby eliminating the United States as a supplier at least for the time being. Peking's motives for the series of postponements and cancellations include:

- o The world price for wheat at the time of the cancellation of US contracts was below the contract price.
- o Although not particularly good, the 1974 autumn harvest turned out better than expected at midyear, when most of the grain was purchased.
- o China's foreign exchange position was unusually tight by the last quarter of 1974, resulting in cancellation of previously postponed deliveries.
- o The unusually volatile conditions that prevailed in the international grain market in mid-1974 may have caused the Chinese to contract for more grain than was required.

18. Even in the absence of US grain, 5.4 million tons are on the books for 1975, mostly under the second year of the three-year agreements with Canada,

Figure 5

PRC: Imports of Grain by Source  
(Million Metric Tons)



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Australia, and Argentina. Should any of these default, the United States could be called upon to make up any deficit. China is not expected to re-enter the market for US corn because of dissatisfaction with quality. It is unlikely that China will be a major customer for US agricultural commodities unless a string of calamitous harvests occurs. In view of past experiences, the Chinese could have difficulty finding a trader willing to enter into a standard contract to provide US commodities.

#### Early Prospects for 1975

19. Preliminary indications are generally favorable for over-wintering crops that will be harvested in the spring and early summer of 1975. Winter wheat is the only major grain crop currently seeded in China. Precipitation in most winter wheat growing areas has been above normal and markedly better than that of the winter of 1973/74. Acreage is reported to be 400,000 hectares greater -- about a 1% increase -- than the 1974 acreage. The fortunes of the other crops to be planted later this year will depend on weather conditions and, in large measure, on the progress of the water management programs now under way and on the regime's ability to provide increased supplies of industrial inputs to agriculture.

#### Prospects for the Longer Term

20. Although China is making headway in raising the production of grain, self-sufficiency in the output of both grain and essential nongrain crops is still some years away. Thus, the leadership has entered into long-term agreements to import up to 5 million tons of grain annually for each of the next two years. These imports are probably viewed as a holding action pending improvement in the supply of agricultural inputs and the expected increase in grain output.

21. China's long-term agricultural improvement program will not show concrete results for some time. The first of the 13 large urea fertilizer plants purchased from Japanese, West European, and US firms will not come on stream until 1976 at the earliest, but the groundwork has been laid for a massive expansion of fertilizer supplies. If the Chinese can make the necessary improvements in water management and in the supply of other complementary inputs, rapid increases in agricultural output could be achieved starting about the end of the decade. Current emphasis on rural capital construction and water management demonstrates China's awareness of the need for a package of inputs to eliminate grain deficits.